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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/758,546	01/14/2004	Michelle Xue Zhou	YOR920040009US1	5994
7590 10/13/2006			EXAMINER	
Ryan, Mason & Lewis, LLP			TO, BAOQUOC N	
90 Forest Avenue			ART UNIT	
Locust Valley, NY 11560			PAPER NUMBER	
			2162	

DATE MAILED: 10/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/758,546	ZHOU ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Baoquoc N. To	2162	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 12 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>02/02/04</u> .  | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

1. Claims 1-37 are presented for examination.

#### ***Drawings***

2. Drawing filed on 01/14/2004 is accepted by the examiner.

#### ***Information Disclosure Statement***

3. The information disclosure statement (IDS) submitted on 02/02/2004. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

#### ***Claim Objections***

4. Claims 21, 23-26, 30-32 and 34-36 are objected to because of the following informalities:

Claim 21 recites "the operation of determining whether the at least..." in line 1. To be consistent with the previously claimed language "the operation of determining whether the at least..." should be read as "wherein the determining whether the at least ..." in claim 20.

Claim 23 recites "the operation of decomposing at least one graphics example..." in line 1. To be consistent with the previously claimed language "the operation of determining whether the at least..." should be read as "wherein the decomposing at least ..." in claim 22.

Claim 24 recites “the operation of decomposing at least one graphics example...” in line 1. To be consistent with the previously claimed language “the operation of determining whether the at least...” should be read as “wherein the decomposing at least ...” in claim 22.

Claim 25 recites “the operation of decomposing at least one graphics example...” in line 1. To be consistent with the previously claimed language “the operation of determining whether the at least...” should be read as “wherein the decomposing at least ...” in claim 22.

Claim 26 recites “the operation of decomposing at least one graphics example...” in line 1. To be consistent with the previously claimed language “the operation of determining whether the at least...” should be read as “wherein the decomposing at least ...” in claim 22.

Claim 30 recites “the operation of obtaining at least one stored graphics example...” in line 1. To be consistent with the previously claimed language “the operation of obtaining at least one stored graphics example...” should be read as “wherein the obtaining at least one stored graphics example...” in claim 19.

Claim 32 recites “the operation of searching a cluster...” in line 1. To be consistent with the previously claimed language “the operation of searching a cluster...” should be read as “wherein the searching a cluster...” in claim 29.

Claim 34 recites “wherein the operation of creating graphics from at least one obtained graphics example...” in line 1. To be consistent with the previously claimed language “wherein the operation of creating graphics from at least one obtained

graphics example..." should be read as "wherein the creating graphics from at least one obtained graphics example..." in claim 19.

Claim 36 recites "the operation of creating a new sketch..." in line 1. To be consistent with the previously claimed language "the operation of creating a new sketch..." should be read as "the create graphics ..." in claim 19.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 2-3 and 20-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 recites "can be used" in line 2 and 4, and "cannot be used" in line 7, claim 3 recites "can be used" in line 2 and "can be synthesized" in line 8, claim 20 recites "can be used" in lines 2, 4 and "cannot be used" in line 7, and claim 21 recites "can be used" in line 2 and "can be synthesized" in line 9 render indefinite because "can be" and "cannot be" imply "may be" or may not be" which does not require the step to performed. For the purpose of examination, the examiner interprets the step(s) is/are performed. Applicants are advised to amend the claims to over the 112 rejection as set forth in the rejection.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-9, 16-18, 19-27 and 34-37 are rejected under 35 U.S.C. 102(b) as being anticipated by Zhou et al. (Building a Visual Database for Example-Based Graphics Generation, Oct 2002).

Regarding on claim 1, Zhou teaches a method automated graphic generation in response to a user request comprising:

Determining a measure of similarity between the user request and one or more stored graphics examples (our algorithm first retrieves the top-K (e.g., K=3) matched examples based on the distances between the request and existing graphics) (col. 1, lines 22-24);

Obtaining at least one stored graphics example based on the similarity measure (it then evaluates whether top-matched examples are adequate for creating a new graphic (col. 1, lines 24-26); and

creating graphics from the at least one obtained example and the user request (to create news graphics from a database of exiting graphics (examples). Upon a user's request (e.g., comparing two data sets) our approach first uses a quantitative similarity measuring model..." (page 1, left column, lines 32-36).

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Regarding on claim 2, Zhou teaches the method of claim 1, further comprising:

Determining whether the at least one obtained graphics example can be used for synthesizing graphics in according with the user request (page 2, left column, lines 24-26);

creating graphics example when the at least one obtained graphics example can be used for synthesized graphics in accordance with the user request (page 2, left column, lines 24-26);

Decomposing the user request into a set of sub-requests when at least one obtained graphics cannot be used for synthesizing graphics in accordance with the user request (if the evaluation fails, the current request is decomposed into a set of request fragments) (col. 1, lines 26-27 and col. 2, lines 1); and

Repeating the graphics generation method using the set of sub-request (the sketch generation is recursively called to created sketches) (page 6, left column, lines 1-2).

Regarding on claim 3, Zhou teaches the method of claim 2, wherein determining whether the at least one obtained graphics example can be used for synthesizing graphics comprises:

Determining whether each graphics example produces a match for data nodes in the user request (page 4, left column, lines 9-11);

Determining whether important data is better represented in the graphics than less important data (page 4, right column, lines 5-10); and

Determining whether every data leaf node in the user request has acquired a visual candidate so that graphics can be synthesized (page 4, right column, lines 5-10).

Regarding on claim 4, Zhou teaches the method of claim 1, further comprising decomposing at least one graphics example (decompose into a tree-based or graph-based) (page 4, left column, lines 9-11).

Regarding on claim 5, Zhou teaches the method of claim 4, wherein decomposing at least one graphics example comprises extracting independent visual structures (page 2, left column, lines 20-23).

Regarding on claim 6, Zhou teaches the method of claim 4, wherein decomposing at least one graphics example comprise removing decorations (page 2, left column, line 27).

Regarding on claim 7, Zhou teaches the method of claim 4, wherein decomposing at least one graphics example comprises extracting leaf nodes to form a visual dictionary (tree-based or graph-based) (page 4, left column, lines 9-11);

Regarding on claim 8, Zhou teaches the method of claim 4, wherein decomposing at least one graphics example comprises dividing by data relations (page 4, left column, lines 24-31).

Regarding on claim 9, Zhou teaches the method of claim 1, wherein the at least one obtained graphics example comprises a top-matched graphics example having the greatest similarity measurement to the user request (page 6, left column, lines 21-23).

Regarding on claim 16, Zhou teaches a method of claim 1, wherein creating graphics form at least one obtained graphic example comprises:



Extracting at least one composition pattern from the database (page 6, right column, lines 21-22);

Generalizing the at least one composition pattern (page 6, right column, lines 21-24);

Determining whether at least one new composition is valid using at least one generalized composition pattern (page 6, right column, lines 23-25); and

Selecting the most probable valid composition (page 6, right column, lines 28-30).

Regarding on claim 17, Zhou teaches a method of claim 16, further comprising:

Generalizing at least one negative composition pattern (page 6, right column, lines 27-29); and

Determining whether at least one new composition is valid using at least one generalized negative composition pattern (page 6, right column, lines 27-29).

Regarding on claim 18, Zhou teaches the method of claim 1, wherein a new sketch comprises inferring visual decoration (page 2, left column, lines 26-27)

Claim 19 is an apparatus which perform the same steps similar to claim 1. Since claim 1 is rejected; therefore, claim 19 is rejected under the same reason.

Claim 20 is depended on claim 18 and having the same concept of claim 2. Since claim 2 is rejected under the same ground of rejection; therefore, claim 19 is rejected under the same reason.

Claim 21 is depended on claim 20 and having the same concept of claim 3. Since claim 3 is rejected; therefore, claim 21 is rejected under the same reason.

Claim 22 is depended on claim 19 and having the same concept of claim 4.

Since claim 4 rejected; therefore, claim 22 is rejected under the same reason.

Claim 23 is depended on claim 22 and having the same concept of claim 5.

Since claim 5 is rejected; therefore, claim 23 is rejected under the same reason.

Claim 24 is depended on claim 22 and having the same concept of claim 6.

Since claim 6 is rejected; therefore, claim 24 is rejected under the same reason.

Claim 25 is depended on claim 22 and having the same concept of claim 7.

Since claim 7 is rejected; therefore, claim 25 is rejected under the same reason.

Claim 26 is depended on claim 22 and having the same concept as in claim 8.

Since claim 8 is rejected; therefore, claim 26 is rejected under the same reason.

Claim 27 is depended on claim 19 and having the same concept as claim 9.

Since claim 19 is rejected; therefore, claim 27 is rejected under the same reason.

Claim 37 is an article of manufacture for automatically generating graphics from a user request, comprising a machine readable medium containing one or more programs which when executed implement the method similar to claim 1. Since claim 37 is rejected; therefore, claim 37 is rejected under the same reason as to claim 1.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 10-15 and 28-33 are rejected under 35 U.S.C. 103(a) as being obvious over Zhou et al. (Building a Visual Database for Example-Based Graphics Generation, Oct 2002) here after Zhou1 in view of Zhou et al. (Applying Machine Learning to Automated Information Graphics Generation, September 2002) hereafter Zhou2.

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(I)(1) and § 706.02(I)(2).

Regarding on claim 10, Zhou1 does not explicitly teach a method of claim 1, further comprising providing user feedback while computing similarity measurement; however, Zhou 2 discloses "users to dynamically adjust various weight in our similarity

model..." (page 3, left column, lines 22-25). This suggests feedback is the weight being adjusted. Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention was made to one ordinary skill in the art at the time of the invention was made to modify Zhou1 system to include weight adjustment as the user feedback as taught by Zhou2 in order to increase the score of the graphic examples to allow better match retrieval in the future.

Regarding on claim 11, Zhou1 does not explicitly teach a method of claim 2, further comprising providing user feedback while creating graphics; however, Zhou 2 discloses "users to dynamically adjust various weight in our similarity model..." (page 3, left column, lines 22-25). This feedback type concept can be employed to the creating graphic to improve the precision. Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention was made to one ordinary skill in the art at the time of the invention was made to modify Zhou1 system to utilize the user feedback as taught by Zhou2 in order to increase the precision of the crated graphics.

Regarding on claim 12, Zhou1 teaches the method of claim 1, wherein obtaining at least one stored graphics example comprises: arranging stored graphics examples into hierarchical clusters according to each computed similarity measurement (page 7, left column, lines 31-40). Zhou1 does not explicitly teach searching a cluster at a highest hierarchical level most likely to contained a top-matched graphics example having the greatest similarity measurement to the user request; determining a measure of similarity between the user request and each graphics example within the searched cluster; and outputting at least one graphic example of the searched cluster having the

greatest similarity measurement. Zhou2 teaches searching a cluster at a highest hierarchical level most likely to contained a top-matched graphics example having the greatest similarity measurement to the user request (page 16, right column, lines 3-5); determining a measure of similarity between the user request and each graphics example within the searched cluster (page 15, left column, lines 10-15); and outputting at least one graphic example of the searched cluster having the greatest similarity measurement (page 17, left column, lines 22-26). Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention was made to modify Zhou1 to include searching for the top matched graphics in the cluster as taught by Zhou2 in order to allow the created of graphic based on the matched retrieval graphics.

Regarding on claim 13, Zhou1 teaches the method of claim 12, further comprising: determining whether the searched cluster has no cluster inside it (page 7, right column, lines 8-12); and repeating the method of obtaining at least one stored graphics example with cluster at a highest level inside the searched cluster, if there are cluster inside the searched cluster, until a cluster having no cluster clusters inside it is found (page 7, right column, lines 8-12).

Regarding on claim 14, Zhou1 teaches the method of claim 12, wherein searching a cluster comprises: selecting a representative graphic example from each cluster at the highest hierarchical level using an approximation (page 7, right column, lines 10-12); and

Selecting the cluster having the representative graphics example with the greatest similarity measurement to the user request (page 6, right column, lines 10-12).

Regarding on claim 15, Zhou1 teaches the method of claim 14, wherein the approximation uses meta properties of the stored graphics examples (page 7, left column, lines 10-12).

Claim 28 is depended on claim 19 and having the same concept as claim 10. Since claim 19 is rejected; therefore, claim 28 is allowed under the same reason.

Claim 29 is depended on claim 19 and having the same concept of 11. Since claim 19 is rejected; therefore, claim 29 is rejected under the same reason.

Claim 30 is depended on claim 19 and having the same concept of claim 12. Since claim 12 is rejected; therefore, claim 30 is rejected under the same reason.

Claim 31 is depended on claim 29 and having the same concept of claim 13. Since claim 3 is rejected; therefore, claim 331 is rejected under the same reason.

Claim 32 is depended on claim 29 and having the same concept of claim 14. Since claim 14 is rejected; therefore, claim 32 is rejected under the same reason.

Claim 33 is depended on claim 29 and having the same concept of claim 15. Since claim 5 is rejected; therefore, claim 33 is rejected under the same reason.

Claim 34 is depended on claim 19 and having the same concept of claim 16. Since claim 16 is rejected; therefore, claim 34 is rejected under the same reason.

Claim 35 is depended on claim 19 and having the same concept of clam 17. Since claim 17 is rejected; therefore, claim 35 is rejected under the same reason.

Claim 36 is depended on claim 19 and having the same concept of claim 18. Since claim 18 is rejected; therefore, claim 36 is rejected under the same reason.

**Conclusion**

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Baoquoc N. To whose telephone number is at 571-272-4041 or via e-mail BaoquocN.To@uspto.gov. The examiner can normally be reached on Monday-Friday: 8:00 AM – 4:30 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached at 571-272-4107.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks  
Washington, D.C. 20231.

The fax numbers for the organization where this application or proceeding is assigned are as follow:

(571) –273-8300 [Official Communication]

BQ To

July 10th, 2006

  
JOHN BREENE  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100